

New or Used?

Investment with Credit Constraints^{*†}

Andrea L. Eisfeldt
Northwestern University

Adriano A. Rampini
Northwestern University

First Draft: March 2004
This Draft: December 2005

Abstract

This paper studies the choice between investment in new and used capital. We argue that used capital inherently relaxes credit constraints and thus firms which are credit constrained invest in used capital. Used capital is cheap relative to new capital in terms of its purchase price but requires substantial maintenance payments later on. The timing of these investment cash outflows makes used capital attractive for credit constrained firms. While used capital is expensive when evaluated using the discount factor of an agent with a high level of internal funds, it is relatively cheap when evaluated from the vantage point of a credit constrained agent with few internal funds. We provide an overlapping generations model and determine the price of used capital in equilibrium. Agents with less internal funds are more credit constrained, invest in used capital, and start smaller firms. Empirically, we find that the fraction of investment in used capital is substantially higher for small firms and varies significantly with measures of financial constraints with the predicted sign.

JEL Classification: D92; E22; G31.

^{*}Address: Department of Finance, Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208. Eisfeldt: Phone: (847) 491-7843. Email: a-eisfeldt@northwestern.edu. Rampini: Phone: (847) 467-1841. Email: rampini@northwestern.edu.

[†]DISCLAIMER: The research in this paper was conducted while the authors were Census Bureau research associates at the Chicago Census Research Data Center. Research results and conclusions expressed are those of the author and do not necessarily indicate concurrence by the Bureau of the Census. This paper has been screened to insure that no confidential data are revealed. Support for this research at the Chicago RDC from NSF (awards no. SES-0004335 and ITR-0427889) is also gratefully acknowledged.